

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (withdrawn): A purified recombinant thermostable DNA polymerase comprising the amino acid sequence set forth in Figure 2 (SEQ ID No. 2).

Claim 2 (withdrawn): A purified recombinant thermostable DNA polymerase comprising an amino acid substitution corresponding to the substitution E681R in the amino acid sequence listing of Figure 2 (SEQ ID No. 2).

Claim 3 (withdrawn): An isolated nucleic acid that encodes a thermostable DNA polymerase, wherein said nucleic acid consists of the nucleotide sequence corresponding to the amino acid sequence set forth in Figure 2 (SEQ ID No. 2).

Claim 4 (withdrawn): A recombinant DNA vector that comprises the nucleic acid of Claim 3.

Claim 5 (withdrawn): A recombinant host cell transformed with the vector of Claim 4.

Claim 6 (withdrawn): The recombinant host cell of Claim 5 that is *E. coli*.

Claim 7 (withdrawn): A method of sequencing DNA comprising the step of generating chain terminated fragments from the DNA template to be sequenced with the DNA polymerase of Claim 1 in the presence of at least one chain terminating agent and one or more nucleotide triphosphates, and determining the sequence of said DNA from the sizes of said fragments.

Claim 8 (withdrawn): A method according to Claim 7, wherein the chain terminating agent comprises a labeled nucleic acid terminator having a net positive or a net negative charge.

Claim 9 (withdrawn): A method for synthesizing a fluorescently labeled polynucleotide, said method comprising the step of mixing a DNA polymerase according to Claim 1 with a primed template.

Claim 10 (withdrawn): A method according to Claim 9, wherein the primed template is a primed template in a chain termination sequencing reaction.

Claim 11 (withdrawn): A method according to Claim 9, wherein the primed template is a primed template in a polymerase chain reaction.

Claim 12 (withdrawn): A kit for fluorescently labeling a polynucleotide, the kit comprising a DNA polymerase according to Claim 1 and a fluorescently labeled nucleotide.

Claim 13 (withdrawn): A kit according to Claim 12, wherein the fluorescently labeled nucleotide comprises a nucleic acid terminator having a net negative or a net positive charge.

Claim 14 (withdrawn): A kit for sequencing DNA comprising the DNA polymerase of Claim 1.

Claim 15 (previously presented): A purified recombinant thermostable DNA polymerase comprising the amino acid sequence set forth in Figure 3 (SEQ ID No. 3).

Claim 16 (previously presented): A DNA polymerase comprising an amino acid substitution corresponding to the substitution E681R in the amino acid sequence listing of Figure 3 (SEQ ID No. 3).

Claim 17 (withdrawn): An isolated nucleic acid that encodes a thermostable DNA polymerase, wherein said nucleic acid consists of the nucleotide sequence corresponding to the amino acid sequence set forth in Figure 3 (SEQ ID No. 3).

Claim 18 (withdrawn): A recombinant DNA vector that comprises the nucleic acid of Claim 17.

Claim 19 (withdrawn): A recombinant host cell transformed with the vector of Claim 18.

Claim 20 (withdrawn): The recombinant host cell of Claim 18 that is *E. coli*.

Claim 21 (withdrawn): A method of sequencing DNA comprising the step of generating chain terminated fragments from the DNA template to be sequenced with the DNA polymerase of Claim 16 in the presence of at least one chain terminating agent and one or more nucleotide triphosphates, and determining the sequence of said DNA from the sizes of said fragments.

Claim 22 (withdrawn): A method according to Claim 21, wherein the chain terminating agent comprises a labeled nucleic acid terminator having a net positive or a net negative charge.

Claim 23 (withdrawn): A method for synthesizing a fluorescently labeled polynucleotide, said method comprising the step of mixing a DNA polymerase according to Claim 16 with a primed template.

Claim 24 (withdrawn): A method according to Claim 23, wherein the primed template is a primed template in a chain termination sequencing reaction.

Claim 25 (withdrawn): A method according to claim 23, wherein the primed template is a primed template in a polymerase chain reaction.

Claim 26 (original): A kit for fluorescently labeling a polynucleotide, the kit comprising a DNA polymerase according to Claim 16 and a fluorescently labeled nucleotide.

Claim 27 (original): A kit according to Claim 26, wherein the fluorescently labeled nucleotide comprises a nucleic acid terminator having a net negative or a net positive charge.

Claim 28 (original): A kit for sequencing DNA comprising the DNA polymerase of Claim 16.